Virginia Cooperative Extension
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Virginia On-Farm Corn Research

2024

A summary of replicated research and demonstration plots conducted by Virginia Cooperative Extension in cooperation with local producers and agribusinesses

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The research and demonstration plots discussed in this publication are a cooperative effort by Virginia Cooperative Extension employees, Virginia Tech and Virginia State University, numerous producers, and many members of the Virginia agribusiness community. The fieldwork and printing of this publication are mainly supported by the Virginia Corn Check-Off Fund through the Virginia Corn Board. This is the forty-first year of this multi-county cooperative project. Further work is planned for 2025. Anyone who would like a physical copy of this publication should contact their local extension office, who can request a copy from the VCE Northumberland County Extension Office.

Producers interested in becoming involved with on-farm plot work, and those with research topic ideas that they would like to have investigated in future on-farm publications should contact their local extension office for further information.

The authors wish to thank the many producers and agribusinesses that participated in these research and demonstration plots. This publication is made possible through their continued support and cooperation.

If you are a person with a disability and desire assistance or accommodation interpreting this publication, or would like to request a fully accessible copy of this publication, please contact Trent Jones at the Northumberland County VCE Office at 804-580-5694 or jonesrt@vt.edu.

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General Summary

These demonstrations and replicated studies provide information that can be used by Virginia corn growers to make better management decisions on their farm. These results should be used along with data from other replicated studies when making decisions. Refer to individual location results for additional detail.

Hybrid Comparisons

Corn hybrid selection remains a challenge for Virginia producers. With numerous competitive seed companies, and more GMO options and seed treatment packages than ever before, hybrid selection can be a difficult decision. We evaluated early maturity hybrids (107 day RM or less) at two locations, mid maturity hybrids (108-112 day RM) at seven locations, and full season hybrids (113 day RM or more) at seven locations. Hybrids from all three maturity groups were planted at the 2024 Virginia Ag Expo site located in Essex County. Farmers should use the results compiled from these studies to assist with future hybrid selection; however, they should continue to plant hybrids of multiple maturities to help spread production risk.

Environmental Impact

Most Virginia On-Farm Corn Research Plots planted in 2024 were negatively affected by adverse weather conditions that impacted yield and grain quality. Excess rain at planting resulted in the necessary replant of one full season corn hybrid comparison plot, and drought and high temperature throughout a majority of the growing season resulted in total loss crop insurance assessment of two additional plots. Results from these plots are not included in this publication.

Yield was severely impacted by drought and high temperature in many 2024 corn hybrid comparison plots. The yield average of plots included in this publication is 105 Bu./A., compared to 213 Bu./A. in 2023 and 186 Bu./A. in 2022. Results from severely impacted plots were included in the publication to demonstrate how hybrids performed under extreme environmental stress.

Disclaimer

Trade and brand names are used only for educational purposes, and Virginia Cooperative Extension does not guarantee or warrant the standards of the product, nor does Virginia Cooperative Extension imply approval of the product to the exclusion of others which may also be suitable.

Early Maturity Hybrid Comparisons

Early Maturity Hybrid Entries

107 Day Relative Maturity or Less

Table 1. Corn hybrids and respective relative maturity, seed treatments, and genetic traits of each hybrid entered in the early maturity group of the Virginia On-Farm Corn Hybrid Comparison plots

Brand	Hybrid	Relative Maturity	Seed Treatments	Genetic Traits
Channel	205-85VT2PRIB	105	Poncho 500	VT2P
Dekalb	DKC56-26RIB	106	Poncho 500	Trecepta
Augusta Seed Corn	2257	107	Cruiser250	PWE (Powercore / Enlist)
Innvictis	B0743PWE	107		PWE (Powercore / Enlist)
Revere	Revere 0518	105	Radius Premium 1250	RR, YGCB
Dyna Gro	DG45TC55RIB	105	P500+Votivo	VT2P
Chemgro Seeds	6725RDP	107	Acceleron 250	VT2P, RIB Complete
Pioneer	P0404AM	104	Poncho 1250, Votivo, Rexil/Rancona	AM, LL, RR2

[a] Empty fields were not reported by the brand representative.

Yield Summary of Early Maturity Hybrid Comparisons

107 Day Relative Maturity or Less

Table 2. A summary of yield results at 15.5% moisture from corn hybrids entered in the early maturity group by plot location sorted by hybrid average

Brand	Hybrid	Virginia Ag Expo	Lancaster	Hybrid Average
Innvictis	B0743PWE	79.7	109.9	94.8
Augusta Seed Corn	2257	69.3	114.0	91.7
Revere	Revere 0518	69.9	88.0	79.0
Dyna Gro	DG45TC55RIB	62.4	90.8	76.6
Pioneer	P0404AM	48.5	104.6	76.5
Dekalb	DKC56-26RIB	47.7	99.4	73.5
Channel	205-85VT2PRIB	35.1	66.9	51.0
Chemgro Seeds	6725RDP	24.8	53.4	39.1
	Location Average	54.7	90.9	

Essex – Virginia Ag Expo Early Maturity Corn Hybrid Comparison

Cooperators

Producer: Level Green Farm – The Ellis Family

Extension: Robbie Longest, VCE- Essex
Trent Jones, VCE – Northumberland and Lancaster
Caleb Bishop, Virginia Tech – Research Technician

Industry: Participating seed companies

Crop Management

Previous Crop: Corn

Soil Type: State fine sandy loam

Tillage: No-Till

Planting Date: April 23, 2024

Planting Equipment: SRES Step 4 Plot Planter

Seeding Rate: 28,000 seeds/acre

Preplant Fertilizer: 60-90-0 broadcast
20-10-0-2S in 2X2 at planting

Sidedress Fertilizer: 120 lb. N (urea)

Preplant Crop Protection: 1 qt./A Roundup + 4 oz./A Leadoff + 1 qt./A Atrazine

Post Emergence Crop Protection: 1 qt./A Roundup + 1 qt./A Atrazine + 1.75 oz./A Realm Q

Harvest Date: October 8, 2024

Harvest Equipment: John Deere S780 w/ 12 row Geringhoff header

Essex – Virginia Ag Expo Early Maturity Corn Hybrid Comparison

Table 3. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the early maturity group planted at the Essex – Virginia Ag Expo location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
CHECK - Innvictis	A1072VT2PRIB	110	15.3	47.1	45.3
Channel	205-85VT2PRIB	105	16.2	37.3	35.1
Dekalb	DKC56-26RIB	106	15.7	47.2	47.7
Augusta Seed Corn	2257	107	16.0	53.2	69.3
Innvictis	B0743PWE	107	15.6	56.3	79.7
Revere	Revere 0518	105	15.9	53.7	69.9
Dyna Gro	DG45TC55RIB	105	15.6	50.9	62.4
Chemgro Seeds	6725RDP	107	16.9	41.6	24.8
Pioneer	P0404AM	104	16.7	49.0	48.5
CHECK - Innvictis	A1072VT2PRIB	110	15.5	46.4	56.6

Discussion: This location was severely impacted by drought in the summer of 2024. Much of the area did not receive any measurable rainfall in the month of June, with minimal in July. Excessive heat coupled with lack of moisture negatively impacted yields and quality. Innvictis A1072VT2PRIB was used as a check. Grain rot severity differed amongst the hybrids, with noticeable differences at harvest.

Many thanks to the Ellis Family and Level Green Farm for hosting the 2024 VA Ag Expo! Also thank you to Caleb Bishop, VT Research Technician for his assistance in planting the plots.

Lancaster County Early Maturity Corn Hybrid Comparison

Cooperators

Producer: Ridgefield Farm, Jock Chilton, Jonathan Chilton, Wayne George, George Sandy

Extension: Trent Jones, ANR – Northumberland and Lancaster County

Industry: Spencer Moody, Helena Agri-Enterprises, LLC.

Crop Management

Previous Crop: Wheat and Double Crop Soybeans

Soil Type: Kempsville Fine Sandy Loam

Tillage: No-Till

Planting Date: April 22, 2024

Planting Equipment: 16 Row John Deere 1770 NT MaxEmerge 5e Upgraded Planter

Seeding Rate: 30,000 Seed / Acre

Preplant Fertilizer: Variable Rate P and K
2x2: 30-30-2.5-5.5S + Zinc and Boron

Sidedress Fertilizer: May 70-0-0-10S

June 50-0-0-10S

Preplant Crop Protection: 24oz/A Empyros + 1 qt/A Atrazine

Post Emergence Crop Protection: 3.6 pt/A Halex GT + 1 qt/A Atrazine

Harvest Date: September 20, 2024

Harvest Equipment: John Deere S760

Lancaster County Early Maturity Corn Hybrid Comparison

Table 4. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the early maturity group planted at the Lancaster County location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
Channel (CHECK)	205-85VT2PRIB	105	18.4	38.2	64.7
Chemgro	6725RDP	107	20.4	42.7	53.4
Dyna gro	DG45TC55RIB	105	20.1	49.6	90.8
Augusta Seed Corn	2257	107	21.4	47.9	114.0
Dekalb	DKC56-26RIB	106	19.4	48.0	99.4
Revere	Revere 0518	105	19.3	57.8	88.0
Pioneer	P0404AM	104	20.4	48.2	104.6
Innvictis	B0743PWE	107	20.7	47.2	109.9
Channel (CHECK)	205-85VT2PRIB	105	20.5	39.7	69.0

Discussion: This plot was placed in a field with very little soil or topographic variability, though there is some variance in yield between the checks placed at either end of the plot. Hybrids emerged well with adequate soil moisture and temperature; however, faced hot and dry environmental conditions throughout vegetative growth, pollination, and early grain fill. Environmental stress resulted in overall yield loss and poor grain quality. Yield average for this plot was 91 Bu./A. compared to 223 Bu./A. in 2022 and 168 Bu./A. in 2020 when hybrid comparison plots were placed in the same field.

Thank you to Jock Chilton and Ridgefield Farms for their continued support of on-farm corn hybrid comparison research, and to Spencer Moody, with Helena Agri-Enterprises for supplying the supporting production information related to this plot.

Mid Maturity Hybrid Comparisons

Mid Maturity Hybrid Entries

108 – 112 Day Relative Maturity

Table 5. Corn hybrids and respective relative maturity, seed treatments, and genetic traits of each hybrid entered in the mid maturity group of the Virginia On-Farm Corn Hybrid Comparison plots

Brand	Hybrid	Relative Maturity	Seed Treatments	Genetic Traits
Channel	211-11VT2PRIB	111	Poncho 500	VT2P
Dekalb	DKC110-41	110	Poncho / Votivo 1250	Trecepta
Augusta Seed Corn	2060	110	Cruiser 250	PWE (Powercore / Enlist)
Innvictis	A1072 VT2PRIB	110		VT2PRIB
Revere	Revere 0918	109	Radius Premium 1250	RR, YGCB
Dyna Gro	DG52VC63RIB	112	P500+Votivo	VT2P
Chemgro Seeds	7255RDP	112	Acceleron 250	VT2P, RIB Complete
Pioneer	P1289AM	112	Pancho1250, Votivo, Rexil/Rancona	AM, LL, RR2
[b] NK Seeds	NK1082-DV	110	CruiserMaxx Corn 500 + Vayantis	DuracadeViptera
[b] Seed Consultants Inc.	SC1094PCE	109	Lumigen	PW/ENL

[a] Empty fields were not reported by the brand representative
[b] Hybrid as only entered at the Virginia Ag Expo location

Yield Summary of Mid Maturity Hybrid Comparisons

108 – 112 Day Relative Maturity

Table 6. A summary of yield results at 15.5% moisture from corn hybrids entered in the mid maturity group by plot location sorted by hybrid average

Brand	Hybrid	Virginia Ag Expo	Westmoreland	Middlesex	King William	Chesapeake	Southampton	Suffolk	Hybrid Average
Dekalb	DKC110-41	93.4	129.1	173.1	133.1	182.0	66.4	124.5	128.8
Chemgro Seeds	7255RDP	97.7	119.7	138.5	158.2	170.1	86.2	123.2	127.7
Augusta Seed Corn	2060	112.9	121.0	144.0	150.9	179.7	46.8	121.8	125.3
Revere	Revere 0918	85.3	128.3	107.5	140.6	183.6	79.1	116.2	120.1
Channel	211-11VT2PRIB	91.3	129.3	149.9	124.3	195.4	33.1	115.7	119.9
Dyna Gro	DG52VC63RIB	93.7	106.9	144.6	118.0	175.2	76.5	117.9	119.0
Pioneer	P1289AM	79.1	109.2	138.0	134.5	173.2	41.1	125.4	114.4
Innvictis	A1072 VT2PRIB	48.4	100.9	134.7	103.3	164.0	54.8	125.7	104.5
NK Seeds	NK1082-DV	73.2							
Seed Consultants Inc.	SC1094PCE	78.8							
	Location Average	85.4	118.1	141.3	132.9	177.9	60.5	121.3	

Essex – Virginia Ag Expo Early Maturity Corn Hybrid Comparison

Cooperators

Producer: Level Green Farm – The Ellis Family

Extension: Robbie Longest, VCE- Essex
Trent Jones, VCE – Northumberland and Lancaster
Caleb Bishop, Virginia Tech – Research Technician

Industry: Participating seed companies

Crop Management

Previous Crop: Corn

Soil Type: State fine sandy loam

Tillage: No-Till

Planting Date: April 23, 2024

Planting Equipment: SRES Step 4 Plot Planter

Seeding Rate: 28,000 seeds/acre

Preplant Fertilizer: 60-90-0 broadcast
20-10-0-2S in 2X2 at planting

Sidedress Fertilizer: 120 lb. N (urea)

Preplant Crop Protection: 1 qt./A Roundup + 4 oz./A Leadoff + 1 qt./A Atrazine

Post Emergence Crop Protection: 1 qt./A Roundup + 1 qt./A Atrazine + 1.75 oz./A Realm Q

Harvest Date: October 8, 2024

Harvest Equipment: John Deere S780 w/ 12 row Geringhoff header

Essex – Virginia Ag Expo Mid Maturity Corn Hybrid Comparison

Table 7. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the mid maturity group planted at the Essex – Virginia Ag Expo location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
CHECK - Innvictis	A1072 VT2PRIB	110	15.5	46.4	56.6
Channel	211-11VT2PRIB	111	15.4	55.4	91.3
Dekalb	DKC110-41	110	16.1	54.1	93.4
Augusta Seed Corn	2060	110	16.2	56.9	112.9
Innvictis	A1072 VT2PRIB	110	15.3	45.6	48.4
Revere	0918	109	16.3	50.6	85.3
DynaGro	DG52VC63RIB	112	16.1	55.2	93.7
Chemgro Seeds	7255RDP	112	17.4	58.1	97.7
Pioneer	P1289AM	112	15.9	59.1	79.1
NK Seeds	NK1082-DV	110	15.9	56.7	73.2
Seed Consultants Inc.	SC1094PCE	109	15.6	57.0	78.8
CHECK - Innvictis	A1072VT2PRIB	110	15.3	44.0	45.2

Discussion: This location was severely impacted by drought in the summer of 2024. Much of the area did not receive any measurable rainfall in the month of June, with minimal in July. Excessive heat coupled with lack of moisture negatively impacted yields and quality. Innvictis A1072VT2PRIB was used as a check. Grain rot severity differed amongst the hybrids, with noticeable differences at harvest.

Many thanks to the Ellis Family and Level Green Farm for hosting the 2024 VA Ag Expo! Also thank you to Caleb Bishop, VT Research Technician for his assistance in planting the plots.

Westmoreland County Mid-Maturity Corn Hybrid Comparison

Cooperators

Producer: Louis Chandler and F.F. Chandler, Jr.

Extension: Stephanie Romelczyk, ANR-Westmoreland,

Trent Jones, ANR – Northumberland/Lancaster

Crop Management

Previous Crop: Soybean

Soil Type: Suffolk sandy loam

Tillage: No-till

Planting Date: April 22, 2024

Planting Equipment: Case IH 950 Cyclo Planter

Seeding Rate: 32,000

Preplant Fertilizer: Broadcast: 50-30-80-10S Starter: 20 gal 20-10-0

Sidedress Fertilizer:, 100 lbs N, 13.5S

Preplant Crop Protection: 1 qt Gramoxone + 1.5 qts Bicep + 1.5 pts Princep + 3 oz Explorer

Post Emergence Crop Protection: 3.75 pts Acuron GT + 1 qt Atrazine + 1 qt Terramar + 2 oz Radiate

Harvest Date: October 10, 2024

Harvest Equipment: CAT Challenger 670 with 6-row corn header

Westmoreland County Mid-Maturity Corn Hybrid Comparison

Table 8. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the mid-maturity group planted at the Westmoreland County location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
Innvictis	A1072VT2PRIB	110	15.6	50.3	100.9
Revere	Revere 0918	109	15.4	54.8	128.3
Channel	211-11VT2PRIB	111	15.9	58.6	129.3
Augusta Seed Corn	2060	110	15.8	56.6	121.0
Dekalb	DKC110-41	110	15.8	57.5	129.1
Chemgro Seeds	7255RDP	112	16.9	56.4	119.7
Pioneer	P1289AM	112	16.5	56.0	102.9
Dyna Gro	DG52VC63RIB	112	17.1	55.2	106.9

Discussion: Hot and dry weather conditions, especially during pollination, contributed to low yields at this location. The first two varieties, Invictus A1072VT2PRIB and Revere 0918, had poor quality kernels at harvest. The whole field had high levels of ear rot, including Aspergillus ear rot.

Middlesex County Mid Maturity Corn Hybrid Comparison

Cooperators

Producer: Crazy Clover Farm

Extension: Robbie Longest, VCE - Essex

Frank Long, VCE - Middlesex

Industry: Participating seed companies

Jason Dawson and JT Elliott, Chemgro Seeds

Ginny Barnes and Chuck Unser, Coastal Agrobusiness

Crop Management

Previous Crop: Soybeans

Soil Type: Emporia loam, Slagle silt loam

Tillage: No-Till

Planting Date: April 24, 2024

Planting Equipment: John Deere 12 row No-Till planter

Seeding Rate: 30,000 seed/acre

Preplant Fertilizer: 50-52-80-6S (April 20, 2024)

Sidedress Fertilizer: 100# N, 12# S (June 21, 2024)

Preplant Crop Protection: 1.5 pt./A Gramoxone + 1.5 qt./A Brawl + 1 pt./A Aatrex (April 26, 2024)

Post Emergence Crop Protection: 1 qt./A Roundup + 3.5 oz./A Status + 2.25 oz./A Radiate

Harvest Date: October 7, 2024

Harvest Equipment: Case IH 2588 w/ 6 row header

Middlesex County Mid Maturity Corn Hybrid Comparison

Table 9. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the mid maturity group planted at the Middlesex County location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
CHECK -Chemgro Seeds	7099SS	109	16.8	59.0	123.0
Channel	211-11VT2P	111	16.6	60.2	149.9
Dekalb	DKC110-41	110	17.5	57.8	173.1
Augusta Seed Corn	2060	110	17.5	57.6	144.0
Innvictis	A1072 VT2PRIB	110	17.8	55.5	134.7
Revere	Revere 0918	109	16.8	56.3	107.5
Dyna Gro	52VC63RIB	112	17.8	56.8	144.6
Chemgro Seeds	7255RDP	112	18.1	57.7	138.5
Pioneer	P1289AM	112	17.4	58.0	138.0
Check -Chemgro Seeds	7099SS	109	15.7	61.2	126.6

Discussion: Overall yields in this plot were very good considering the season with a plot average yield of 139.3 Bu./A. This location did receive some rain at times when surrounding areas did not. Chemgro 7099SS was used as a grower check. Minimal grain damage was observed, and test weights were very good despite the drought impacts.

King Willaim County Mid Maturity Corn Hybrid Comparison

Cooperators

Producer: Owen Johnson – Old Place Farm

Extension: Turner Minx, VCE – King William/King and Queen

Robbie Longest, VCE – Essex

Crop Management

Previous Crop: Soybeans, Vetch and Rye Cover Crop

Soil Type: Altavista Fine Sandy Loam

Tillage: No-till

Planting Date: April 29, 2024

Planting Equipment: John Deere 7200 6 Row

Seeding Rate: 29,000

Preplant Fertilizer: Broadcast: 115 lb/A 11-52-0 MAP and 100 lb/A 0-0-60 Potash to provide 12-60-60 lb/A

2 x 2 Banded: 40-20-0-4 Starter Fertilizer

Sidedress Fertilizer: 24-0-0-3 to provide 100 lb. N / Acre

Preplant Crop Protection: 1 qt Gramoxone, 1 qt Atrazine, 1 pt 2,4-D LV-4, 1.5 oz Lead-Off,

Post Emergence Crop Protection: 3.6 pt Halex GT, 1 pt Atrazine

Harvest Date: October 11, 2024

Harvest Equipment: John Deere 8820 Titan II

King William County Mid Maturity Corn Hybrid Comparison

Table 10. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the mid maturity group planted at the King William County location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
Chemgro Seeds	7255RDP	112	18.4	55.5	158.2
Dekalb	DKC110-41	110	17..2	56.5	133.1
Augusta Seed Corn	2060	110	17.6	56	150.9
Dyna Gro	DG52VC63RIB	112	17.3	56.2	118.0
Revere	Revere 0918	109	16.6	54.7	140.6
Channel	211-11VT2PRIB	110	16.3	58.6	124.3
Pioneer	P1289AM	112	17.2	56.4	134.5
Innvictis	A1072 VT2PRIB	110	16.0	52.6	103.3

Discussion: The crop was affected by dry weather throughout the growing season. Conditions were very dry at planting and an extended period of no rain occurred in June after side dress.

City of Chesapeake Mid Maturity Corn Hybrid Comparison

Cooperators

Producer: C. Frank Brickhouse Jr.

Extension: Roy D. Flanagan III- Virginia Beach

Dr. Nathan Sedghi- Chesapeake

Crop Management

Previous Crop: Soybeans

Soil Type: Acredale Silt Loam

Tillage: Conventional Tillage

Planting Date: May 1, 2024

Planting Equipment: John Deere 7300 JD MaxEmerge Vacuum Planter 12 row

Seeding Rate: 30,000 seeds/ acre

Preplant Fertilizer: 600lbs of 14-14-14 and 30 gal. of 32-0-0 w/ Serpentine 1qt/100gal.

Preplant Crop Protection: TriVolt @ 22 oz./acre

Harvest Date: October 16,. 2024

Harvest Equipment: John Deere 9860, 1293 corn head

City of Chesapeake Mid Maturity Corn Hybrid Comparison

Table 11. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the mid maturity group planted at the Chesapeake location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
Revere	Revere 0918	109	14.2	57.3	183.6
Augusta Seed Corn	2060	110	14.1	55.9	179.7
Check- Dekalb	DKC64-22	114	14.9	60.6	195.2
Innvictis	A1072 VT2PRIB	110	13.8	55.2	164.0
Dekalb	DKC110-41	110	14.7	57.5	182.0
Check- Dekalb	DKC64-22	114	15	59.8	187.9
Channel	211-11VT2PRIB	111	14.4	59.9	195.4
Dyna Gro	DG52VC63RIB	112	15.1	58.7	175.2
Check- Dekalb	DKC64-22	114	14.7	60.1	178.2
Chemgro Seeds	7255RDP	112	14.9	58.1	170.1
Pioneer	P1289AM	112	14.8	59.7	173.2
Check- Dekalb	DKC64-22	114	15	59.4	166.1

Southampton County Mid Maturity Corn Hybrid Comparison

Cooperators

Producer: D&J Farms, Dennis & Denton Spruill

Extension: Elizabeth Cooper, VCE Surry/Sussex

Crop Management

Previous Crop: Soybeans

Soil Type: Slagle, Fine Sandy Loam

Tillage: Strip-Till

Planting Date: April 17, 2024

Planting Equipment: KMC 8-Row Strip-Till Rig, John Deere 7300 MaxEmerge Planter

Seeding Rate: 28,000 seed / acre

Preplant Fertilizer: 2.5 tons Poultry Litter, (17-17-0 2x2 band @ 11 gal./acre at planting)

Sidedress Fertilizer: 32-0-0 @ 120 units

Preplant Crop Protection: 32 oz. Roundup, 1 qt. 2,4-D, 2 oz. Valor

Post Emergence Crop Protection: 3.6 qt. Halex GT, 2 qt. Atrazine

Harvest Date: September 11, 2024

Harvest Equipment: John Deere 9760 Grain Combine

Southampton County Mid Maturity Corn Hybrid Comparison

Table 12. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the mid maturity group planted at the Southampton County location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
Channel	211-11VT2PRIB	111	16	58.2	33.1
Dekalb	DKC 110-41	110	16.5	58.3	66.4
Augusta Seed Corn	2060	110	15.9	59.7	46.8
Innvictis	A1072 VT2PRIB	110	15.3	59.5	54.8
Revere	0918	109	15.2	58.2	49.1
Dyna Gro	DG52VC63RIB	112	15.8	56.5	76.5
Chemgro Seeds	7255RDP	112	15.3	60.1	86.2
Pioneer	P1289AM	112	16	60	41.1

Discussion: The growing season was difficult and dry much like the rest of the state. The National Weather Service data shows between 13 and 15 inches of rainfall total during the overall growing season with a persistent drought and no real significant rainfall in the month of June. There were a few significant rainfall events in July and then it again turned dry throughout August. Corn and other crops across the region suffered and consistently showed lower yields and a majority of the region was given drought disaster declaration by the USDA. Planting was difficult with minimal topsoil moisture at the start of the growing season.

City of Suffolk Mid Maturity Corn Hybrid Comparison

Cooperators

Producer: Matthew Wilkins

Extension: Andrea Slye, VCE-Suffolk

Crop Management

Previous Crop: Soybeans

Tillage: No till

Planting Date: April 17, 2024

Planting Equipment: John Deere 1720 Planter

Seeding Rate: 26,000 seed/Acre

Preplant Fertilizer: 12-21-21 blend

Sidedress Fertilizer: 28-0-0-5 at 45 gpa

Preplant Crop Protection: Roundup 1 qt; Zidua 5.5 oz; Atrazine 40oz

Post Emergence Crop Protection: Roundup 1 qt

Harvest Date: September 12, 2024

Harvest Equipment: John Deere 9500

City of Suffolk Mid Maturity Corn Hybrid Comparison

Table 13. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the mid maturity group planted at the City of Suffolk location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
Innvictis	A1072 VT2PRIB	110	17.3	54.2	125.7
Dekalb	DKC110-41	110	17.6	54.6	124.5
Pioneer	P1289AM	112	18	55.6	125.4
Chemgro Seeds	7255RDP	112	17.5	54.9	123.2
Dyna Gro	DG52VC63RIB	112	18.1	55	117.9
Augusta Seed Corn	2060	110	17.2	55.6	121.8
Revere	Revere 0918	109	17.3	56.8	116.2
Channel	211-11VT2PRIB	111	17.1	56.2	115.7

Full Maturity Hybrid Comparisons

Full Maturity Hybrid Entries

113 Day Relative Maturity or More

Table 14. Corn hybrids and respective relative maturity, seed treatments, and genetic traits of each hybrid entered in the full maturity group of the Virginia On-Farm Corn Hybrid Comparison plots

Brand	Hybrid	Relative Maturity	Seed Treatments	Genetic Traits
Channel	218-66VT2PRIB	118	Poncho 500	VT2P
Dekalb	DKC68-35	118	Poncho / Votivo 1250	VT2P
Augusta Seed Corn	1465	115	Cruiser 250	VT2P
Innvictis	A1551VT2PRIB	115		VT2PRIB
Revere	Revere 1627	116	Radius Premium 1250	RR, YGCB
Dyna Gro	DG60TC45	120	P500 + Votivo	Trecepta
Chemgro Seeds	7444PCE	114	CruiserMaxx Vibrance, Vayantis	PowerCore
Pioneer	P17677AM	117	Pancho 1250, Votivo, Rexil/Rancona	AM, LL, RR2
[b] NK Seeds	NK1661-AA	116	CruiserMaxx Corn 500 + Vayantis	Agrisure Above
[b] Seed Consultants Inc.	SC1135PCE	113	Lumigen	PW/ENL

a Empty fields were not reported by the brand representative
b Hybrid was only entered at the Virginia Ag Expo location

Yield Summary of Full Maturity Hybrid Comparisons

113 Day Relative Maturity or More

Table 15. A summary of yield results at 15.5% moisture from corn hybrids entered in the full maturity group by plot location sorted by hybrid average

Brand	Hybrid	Virginia Ag Expo	Prince George	Chesapeake	Charlotte	Appomattox	Southampton	Suffolk	Hybrid Average
Revere	Revere 1627	107.7	149.1	176.5	128.1	159.6	55.6	127.4	129.1
Pioneer	P17677AM	99.5	150.4	192.3	114.2	142.8	73.1	130.0	128.9
Dyna Gro	DG60TC45	84.7	143.5	202.1	116.1	163.4	48.7	130.1	127.0
Dekalb	DKC68-35	90.4	148.9	182.0	121.9	151.7	65.4	127.1	126.8
Channel	218-66VT2PRIB	73.1	149.1	181.9	115.8	154.8	52.5	128.0	122.2
Augusta Seed Corn	1465	78.6	123.4	202.6	103.1	142.2	77.9	127.4	122.2
Chemgro Seeds	7444PCE	77.3	138.9	165.1	102.3	139.3	53.8	127.8	114.9
Invictis	A1551VT2PRIB	79.9	129.1	175.0	101.3	130.7	56.6	128.6	114.5
	Location Average	86.4	141.6	184.7	112.9	148.1	60.5	128.3	

Essex – Virginia Ag Expo Full Maturity Corn Hybrid Comparison

Cooperators

Producer: Level Green Farm – The Ellis Family

Extension: Robbie Longest, VCE- Essex
Trent Jones, VCE – Northumberland and Lancaster
Caleb Bishop, Virginia Tech – Research Technician

Industry: Participating seed companies

Crop Management

Previous Crop: Corn

Soil Type: State fine sandy loam

Tillage: No-Till

Planting Date: April 23, 2024

Planting Equipment: SRES Step 4 Plot Planter

Seeding Rate: 28,000 seeds/acre

Preplant Fertilizer: 60-90-0 broadcast
20-10-0-2S in 2X2 at planting

Sidedress Fertilizer: 120 lb. N (urea)

Preplant Crop Protection: 1 qt./A Roundup + 4 oz./A Leadoff + 1 qt./A Atrazine

Post Emergence Crop Protection: 1 qt./A Roundup + 1 qt./A Atrazine + 1.75 oz./A Realm Q

Harvest Date: October 8, 2024

Harvest Equipment: John Deere S780 w/ 12 row Geringhoff header

Essex – Virginia Ag Expo Full Maturity Corn Hybrid Comparison

Table 16. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the full maturity group planted at the Essex – Virginia Ag Expo location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
CHECK - Innvictis	A1072 VT2PRIB	110	15.3	44.0	45.2
Channel	218-66VT2PRIB	118	17.5	52.6	73.1
Dekalb	DKC68-35	118	17.5	54.2	90.4
Augusta Seed Corn	1465	115	16.6	53.6	78.6
Innvictis	A1551VT2PRIB	115	17.9	53.2	79.9
Revere	Revere 1627	116	17.9	57.5	107.7
Dyna Gro	DG60TC45	120	17.9	57.3	84.7
Chemgro Seeds	7444PCE	114	16.3	57.9	77.3
Pioneer	P17677AM	117	16.5	59.5	99.5
CHECK - Innvictis	A1072 VT2PRIB	110	15.3	45.2	50.2

Discussion: This location was severely impacted by drought in the summer of 2024. Much of the area did not receive any measurable rainfall in the month of June, with minimal in July. Excessive heat coupled with lack of moisture negatively impacted yields and quality. Innvictis A1072VT2PRIB was used as a check. Grain rot severity differed amongst the hybrids, with noticeable differences at harvest.

Many thanks to the Ellis Family and Level Green Farm for hosting the 2024 VA Ag Expo! Also thank you to Caleb Bishop, VT Research Technician for his assistance in planting the plots.

Prince George County Full Maturity Corn Hybrid Comparison

Cooperators

Producer: Calvin Clements

Extension: Scott Reiter, VCE – Prince George County

Crop Management

Previous Crop: Soybean

Soil Type: Emporia and Norfolk sandy loam

Tillage: Strip-till, in-row subsoiler

Planting Date: April 17, 2024

Planting Equipment: John Deere MaxEmerge XP vacuum

Seeding Rate: 29,500 seed / acre

Preplant Fertilizer: Broadcast dry -340 lbs 6-12-35; 20-40-120-13S-0.25Zn-1.1Mn

2x2 Starter -15 gal 15-15-0-2S-0.3Zn-0.3B; 25-25-0-3S-0.75Zn-0.5B w/ Asset

Broadcast liquid – 15 gal 30% UAN; 48-0-0

Sidedress Fertilizer: Dribble – 30 gal 24-0-0-3S; 80-0-0-10S

Total 173 N – 65 P -120 K -26 S – 1 Zn -1.1Mn – 0.5B

Preplant Crop Protection: Gramoxone 2 pints/A + TrizMet 2 quarts/A

Post Emergence Crop Protection: None

Harvest Date: September 24, 2024

Harvest Equipment: John Deere S760 + weigh wagon

Prince George Full Maturity Corn Hybrid Comparison

Table 17. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the full maturity group planted at the Prince George location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
Axis	64B18 RR2	115	18.4	55.2	152.1
Innvictis	A1551VT2PRIB	115	19.2	53.8	129.1
Augusta Seed Corn	1465	115	182	56.4	123.4
Revere	Revere 1627	116	18.4	56.3	149.1
Dekalb	DKC68-35	118	18.8	57.1	148.9
Pioneer	P17677AM	117	18.6	56.7	150.4
Dyna Gro	DG60TC45	120	19.5	54.4	143.5
Dekalb	DKC 67-44 VT2P	117	18.2	56.9	125.2
Channel	218-66VT2PRIB	118	18.5	54.0	149.1
Chemgro Seeds	7444PCE	114	18.4	56.6	138.9
Axis	64B18 RR2	115	18.6	56.2	134.0
Average			18.6	55.8	140.3

Discussion: This location yielded very well considering the 5-week drought in June-July. Rain returned in early July through harvest. Overall grain quality was good. Pioneer 17677AM was the prettiest grain sample with long bright kernels. Dyna-Gro DG 60TC45 had noticeable kernel damage and some sprouts as reflected in the low test weight. Channel Seed 218-66 VT2PRIB also had some kernel damage (less than DG 60TC45) along with low test weight. Actual damage was not quantified with grain grading.

City of Chesapeake Full Maturity Corn Hybrid Comparison

Cooperators

Producer: C. Frank Brickhouse Jr.

Extension: Roy D. Flanagan III, VCE - Virginia Beach

Dr. Nathan Sedghi, VCE – Chesapeake

Crop Management

Previous Crop: Soybeans

Soil Type: Acredale Silt Loam

Tillage: Conventional Tillage

Planting Date: May 1, 2024

Planting Equipment: John Deere 7300 JD Maxi Merge Vacuum Planter 12 row

Seeding Rate: 30,000 seeds / acre

Preplant Fertilizer: 600lbs of 14-14-14 and 30 gal. of 32-0-0 w/ Serpentine 1qt/100gal.

Preplant Crop Protection: TriVolt @ 22 oz./acre

Harvest Date: October 16, 2024

Harvest Equipment: John Deere 9860, 1293 corn head

City of Chesapeake Full Maturity Corn Hybrid Comparison

Table 18. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the full maturity group planted at the City of Chesapeake location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
Check	DKC64-22	114	14.7	60.9	172.3
Dyna Gro	DG60TC45	120	15.2	60	202.1
Dekalb	DKC68-35	118	15.3	60	182
Check	DKC64-22	114	14.9	60	182.3
Channel	218-66VT2PRIB	118	16	57.6	181.9
Pioneer	P17677AM	117	15.5	58.9	192.3
Check	DKC64-22	114	14.9	59.4	161.9
Revere	Revere 1627	116	15	59.6	176.5
Augusta Seed Corn	1465	115	14.9	59.8	202.6
Check	DKC64-22	114	14.9	60.7	184.1
Innvictis	A1551VT2PRIB	115	14.9	57.1	175.0
Chemgro Seeds	74444PCE	114	14.6	58.7	165.1

Charlotte County Full Maturity Corn Hybrid Comparison

Cooperators

Producer: Grind-N-Stone Farm; The Poindexter Family

Extension: Joanne Jones, VCE – Charlotte

Bruce Jones, VCE – Appomattox

Crop Management

Previous Crop: Full Season Soybeans

Soil Type: Cecil Fine Sandy Loam

Tillage: No-till

Planting Date: April 18, 2024

Planting Equipment: 4 row John Deere 7000

Preplant Fertilizer: 2 tons litter, ~250 pounds per acre 30-30-60 banded during planting

Preplant Crop Protection: 32oz roundup, 1oz Sharpen, 32oz atrazine

Post Emergence Crop Protection: 24oz Powermax, 32oz Atrazine, 3 oz Capreno. 10oz Veltyma with drone at brown silk

Harvest Date: October 11, 2024

Harvest Equipment: R52 Gleaner 4 Row

Charlotte County Full Maturity Corn Hybrid Comparison

Table 19. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the full maturity group planted at the Charlotte County location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
Chemgro Seeds	7444PCE	114	16.6	59.3	102.3
Augusta Seed Corn	1465	115	16.6	57.8	103.1
Innvictis	A1551VT2PRIB	115	17.5	54.2	101.3
Channel	218-66VT2PRIB	118	20.2	50.6	115.8
Dekalb	DKC68-35	118	18.0	57.9	121.9
Revere	Revere 1627	116	18.7	56.1	128.1
Dyna Gro	D60TC45	120	19.3	52.2	116.1
Pioneer	P17677AM	117	20.2	51.1	114.2

Appomattox County Full Maturity Corn Hybrid Comparison

Cooperators

Producer: Ben Cole

Extension: Bruce Jones, VCE – Appomattox

Joanne Jones, VCE – Charlotte

Crop Management

Previous Crop: Full Season Soybeans

Soil Type: Cecil Sandy Loam

Tillage: No-till

Planting Date: May 13, 2024

Planting Equipment: 8 row Kinze

Seeding Rate: 28,000 seed / acre

Preplant Fertilizer: 5 gallons 11-37-0 plus zinc. 10 gallons 28-0-0-5 plus stabilizer dropped behind closing wheels. 150 units Nitrogen with sulfur and boron.

Preplant Crop Protection: 32oz Roundup, 1oz Sharpen, 32oz Atrazine

Post Emergence Crop Protection: 24oz Powermax, 32oz Atrazine, 3 oz Capreno. 10oz Veltyma with drone at brown silk

Harvest Date: November 6, 2024

Harvest Equipment: 9770 STS John Deere

Appomattox County Full Maturity Corn Hybrid Comparison

Table 20. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the full maturity group planted at the Appomattox County location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
Dekalb	DKC68-35	118	12.4	59.5	151.7
Revere	Revere 1627	116	12.4	58.4	159.6
Dyna Gro	D60TC45	120	12.6	56.8	163.4
Channel	218-66VT2PRIB	118	12.3	59.0	154.8
Augusta Seed Corn	1465	115	12.0	58.3	142.2
Pioneer	P17677AM	117	12.2	58.7	142.8
Chemgro Seeds	7444PCE	114	12.3	59.1	139.3
Innvictis	1551VT2PRIB	115	11.9	59.8	130.7

Discussion: It was a very dry season.

Southampton County Full Maturity Corn Hybrid Comparison

Cooperators

Producer: D&J Farms, Dennis & Denton Spruill

Extension: Elizabeth Cooper, VCE – Surry and Sussex

Crop Management

Previous Crop: Soybeans

Soil Type: Slagle, Fine Sandy Loam

Tillage: Strip-Till

Planting Date: April 17, 2024

Planting Equipment: KMC 8-Row Strip-Till Rig, John Deere 7300 MaxEmerge Planter

Seeding Rate: 28,000 seed / acre

Preplant Fertilizer: 2.5 tons Poultry Litter, (17-17-0 2x2 band at 11 gal./acre at planting)

Sidedress Fertilizer: 32-0-0 at 120 units

Preplant Crop Protection: 32 oz. Roundup, 1 qt. 2,4-D, 2 oz. Valor

Post Emergence Crop Protection: 3.6 qt. Halex GT, 2 qt. Atrazine

Harvest Date: September 11, 2024

Harvest Equipment: John Deere 9760 Grain Combine

Southampton County Full Maturity Corn Hybrid Comparison

Table 21. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the full maturity group planted at the Southampton County location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
Channel	218-66VT2PRIB	118	15.7	61.2	52.5
Dekalb	DKC68-35	118	17.2	60.8	65.4
Augusta Seed Corn	1465	115	16.7	63.2	77.9
Innvictis	A1551VT2PRIB	115	16.5	58.3	56.6
Revere	Revere 1627	116	16.2	60	55.6
Dyna Gro	DG60TC45	120	17	59.3	48.7
Chemgro Seeds	7444PCE	114	17.7	57.3	53.8
Pioneer	P17677AM	117	16.3	58.9	73.1

Discussion: The growing season was difficult and dry much like the rest of the state. The National Weather Service data shows between 13 and 15 inches of rainfall total during the overall growing season with a persistent drought and no real significant rainfall in the month of June. There were a few significant rainfall events in July and then it again turned dry throughout August. Corn and other crops across the region suffered and consistently showed lower yields and a majority of the region was given drought disaster declaration by the USDA. Planting was difficult with minimal topsoil moisture at the start of the growing season.

City of Suffolk Full Maturity Corn Hybrid Comparison

Cooperators

Producer: Matt Wilkins

Extension: Andrea Slye, VCE – Suffolk

Crop Management

Previous Crop: Soybeans

Tillage: No till

Planting Date: April 17, 2024

Planting Equipment: John Deere 1720 Planter

Seeding Rate: 26,000 seed / acre

Preplant Fertilizer: 12-21-21 blend

Sidedress Fertilizer: 28-0-0-5 at 45 gpa

Preplant Crop Protection: Roundup 1 qt; Zidua 5.5 oz; Atrazine 40oz

Post Emergence Crop Protection: Roundup 1 qt

Harvest Date: September 12, 2024

Harvest Equipment: John Deere 9500

City of Suffolk Full Maturity Corn Hybrid Comparison

Table 22. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the full maturity group planted at the City of Suffolk location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (Bu./A at 15.5%)
Dyna Gro	DG60TC45	120	18.6	55.8	130.1
Augusta Seed Corn	1465	115	18.5	55.2	127.4
Revere	Revere 1627	116	19.3	55.3	127.4
Chemgro Seeds	7444PCE	114	19.5	56.3	127.8
Dekalb	DKC68-35	118	19.2	54.4	127.1
Channel	218-66VT2PRIB	118	19.4	52.4	128.0
Pioneer	P17677AM	117	17.6	55.4	130.0
Innvictis	A1551VT2PRIB	115	18.2	55.8	128.6